Title (en)

PROJECTOR CONFIGURATION WITH SUBDIVIDED OPTICAL APERTURE FOR NEAR-EYE DISPLAYS, AND CORRESPONDING OPTICAL SYSTEMS

Title (de)

PROJEKTORKONFIGURATION MIT UNTERTEILTER OPTISCHER APERTUR FÜR NAHFELDANZEIGEN UND ENTSPRECHENDE OPTISCHE SYSTEME

Title (fr)

CONFIGURATION DE PROJECTEUR AVEC OUVERTURE OPTIQUE SUBDIVISÉE POUR AFFICHAGES PROCHES DE L' IL, ET SYSTÈMES OPTIQUES CORRESPONDANTS

Publication

EP 3625617 B1 20230906 (EN)

Application

EP 19802792 A 20190514

Priority

- US 201862670886 P 20180514
- IB 2019053972 W 20190514

Abstract (en)

[origin: US2019346609A1] An optical system for displaying a projected image to an observer includes a light-guide optical element having two major parallel surfaces and configured for guiding illumination corresponding to a projected image collimated to infinity by internal reflection at the major parallel surfaces from a coupling-in region to a coupling-out region where at least part of the illumination is coupled out towards an eye of the observer, and a projector configuration associated with the coupling-in region of the light-guide optical element. The projector configuration includes a number of adjacent optical arrangements, each including collimating optics deployed for projecting a subset of the illumination. The adjacent optical arrangements cooperate to provide an entirety of the projected image to the coupling-out region.

IPC 8 full level

G02B 27/01 (2006.01); **G02B 3/00** (2006.01)

CPC (source: EP IL KR US)

G02B 3/005 (2013.01 - EP IL KR); **G02B 6/003** (2013.01 - IL KR US); **G02B 6/0035** (2013.01 - IL KR US); **G02B 27/0172** (2013.01 - EP IL KR); G02B 2027/0123 (2013.01 - EP IL KR)

Citation (examination)

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US 10830938 B2 20201110; **US 2019346609 A1 20191114**; CN 112119346 A 20201222; CN 112119346 B 20220819; EP 3625617 A1 20200325; EP 3625617 A4 20200909; EP 3625617 B1 20230906; EP 4339656 A2 20240320; EP 4339656 A3 20240605; IL 278588 B 20210531; JP 2021524046 A 20210909; JP 2024045114 A 20240402; JP 7416407 B2 20240117; JP 7474004 B2 20240424; KR 20210008294 A 20210121; TW 201947264 A 20191216; US 11448811 B2 20220920; US 2021055466 A1 20210225; WO 2019220330 A1 20191121

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US 201916411197 A 20190514; CN 201980032060 A 20190514; EP 19802792 A 20190514; EP 23193946 A 20190514; IB 2019053972 W 20190514; IL 27858820 A 20201109; JP 2019549383 A 20190514; JP 2023217304 A 20231222; KR 20197030054 A 20190514; TW 108116563 A 20190514; US 202017093772 A 20201110